

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action dated October 2, 2006. A Petition for Extension of Time (two months) and the fee therefor are submitted herewith.

Claims 1-31 and 33-35 are pending in the instant application.

In the Office Action, claims 1, 2, and 4-12 were rejected as being anticipated by Oberlander (6,554,852).

It is an object of an embodiment of the present application to provide a sternal closure system for re-approximating left and right halves of a patient's longitudinally incised sternum. According to an embodiment of the present application, the closure system provides means for attaching and thereafter separating sternum halves which were attached using the closure system according to the present application. In this regard, an embodiment of the present application is directed to a sternal closure system in which two previously laterally dissected sternum halves can be affixed in close proximity to each other. This is better illustrated with reference to paragraph 25 of the Specification, which states that "the present invention provides improved devices and method for re-approximating the sternal halves of a patient's sternum following a median or partial sternotomy that facilitates ready access to the thoracic cavity during or after medical procedure (e.g., in the case of a medical emergency) and which overcome sternal nonunion problems inherent in previous sternal closure devices."

Accordingly, amended claim 1 recites a sternal closure system for re-approximating left and right halves of a patient's longitudinally incised sternum during a surgical procedure in the thoracic cavity, comprising, *inter alia*, "a first, at least one anchor means, adapted to be disposed inside the left half of the sternum; a second, at least one anchor means, adapted to be disposed inside the right half of the sternum; and at least one fixing means adapted for rigidly and releasably connecting said first, at least one anchor means, disposed within the left half of the sternum, to said second, at least one anchor means disposed within the right half of the sternum, so as to facilitate separation of the left and right halves of the sternum when necessary."

In the rejection, the Examiner asserts that Oberlander discloses a similar closure system. However, it is respectfully submitted that the Examiner is incorrect, as Oberlander is directed to a multi-anchor suture for facilitating the re-attachment of soft tissue to bone (e.g., see, Oberlander,

Abstract). In this regard, when attached, the soft tissue is superimposed upon the bone located thereunder. Accordingly, Oberlander is directed to completely different object than that of the present application.

However, in contrast to that which is taught by the present application, Oberlander is directed to a system for releasably reattaching two lateral horizontally disposed bone sections (i.e., separate sections of bone). However, as stated above, Oberlander teaches reattaching a soft tissue superposed (vertically disposed) to a bone, located thereunder.

Moreover, regarding the Examiner's assertion (at page 3 of the Office Action) that Oberlander teaches the left and right halves of the sternum, and separating the left and right halves of the sternum, as recited in the claims, Applicant respectfully disagrees. With reference to FIGs. 9-14, Oberlander teaches inserting the suture into a single bone 60. Moreover, it is respectfully submitted that one skilled in the art would not seek information from a system for reconnecting a soft tissue to a bone in order to solve the problem of reconnecting two dissected laterally disposed sternal halves.

Further, amended claim 1 includes the recitation of "at least one fixing means adapted for rigidly and releasably connecting said first, at least one anchor means, disposed within the left half of the sternum, to said second, at least one anchor means disposed within the right half of the sternum."

In contrast with that which is recited by the claims of the present invention, Oberlander teaches a suture 30, 31 which is bowed and, thus, cannot act as an equivalent to the rigid fixing means of the present invention. Moreover, Oberlander does not teach, disclose, or suggest releasably attaching the suture 30, 31 to anchoring means. Further, Oberlander does not teach, disclose, or suggest releasably attaching the anchors 20, 21 together. As can be readily understood, the barbed anchors of Oberlander, as their name implies, are used to directly anchor the suture to the bone, while the suture engages the soft tissue and vertically holds this soft tissue tightly against the bone (e.g., see, Oberlander, col. 6, lines 56-62 and FIGs. 9-11 and 13-14). However, as taught by an embodiment of the present application, the fixing means 14 positively locates first and second anchor means (and the respectively attached sections of the sternum) in a desired position) in a desired location. In other words, according to the present application, the

fixing means is used to locate (i.e., position) the first and second anchor means (and the respective attached section of sternum in a desired position) and prevent the first and second suction means and the respectively attached sections of the sternum from drifting away from each other. Additionally, the fixing means can be used to locate the first and second sternum halves apart from each other by a desired distance (e.g., such that the laterally dissected first and second sternum halves do not touch each other, if desired).

For at least the above-stated reasons, it is respectfully submitted that Oberlander does not teach, disclose, or suggest each and every limitation of amended claim 1. Accordingly, Oberlander fails to anticipate claim 1.

Further, with regard to the rejections of claim 1 as being obvious over Oberlander in view of Sasaki (5,735,183), Oberlander is discussed above with respect to the anticipation rejection of claim 1. However, as Sasaki, which teaches a power screwdriver including a clutch mechanism that can be used for inserting screws into material such as plaster board (e.g., see, Sasaki, col. 1, lines 14-21), does not cure the deficiencies of Oberlander, claim 1 cannot be rendered obvious by the combination of Oberlander and Sasaki.

Further, with regard to the rejections of claim 1 as being obvious over Oberlander, in view of Sasaki, and further in view of Runck (3,832,139), Oberlander and Sasaki are discussed above. However, as Runck, which teaches an apparatus for combining two gasses, does not cure the deficiencies of Oberlander and Sasaki, claim 1 cannot be rendered obvious by the combination of Oberlander, Sasaki, and Runck.

Additionally, with regard to the rejection of claim 1 as being obvious over Oberlander in view of Bone (3,875,648), Oberlander is discussed above with respect to the anticipation rejection of claim 1. However, as Bone, which teaches an apparatus and a method for holding two layers (i.e., 115A and 115B) together (e.g., see, Bone, FIGs. 20 and 23-25) does not cure the deficiencies of Oberlander, claim 1 cannot be rendered obvious by the combination of Oberlander and Bone.

Accordingly, for at least the above-stated reasons, it is respectfully requested that the rejections of claim 1 under 35 U.S.C. §102(b) and §103(a) be withdrawn.


Dependent claims 2-31 are likewise believed to be allowable by virtue of their dependence on amended independent claim 1 and also because of the subject matter that these claims add to independent claim 1 from which they depend. Accordingly, reconsideration and withdrawal of the rejections of dependent claims 2-31 is respectfully requested.

The application is now believed to be in condition for allowance.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended, and pass the case to issue.

Respectfully submitted,

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